REMARKS

It is noted that (1) amended dependent Claim 12, together with Claims 13-16 dependent thereon, are rejected under 35 U.S.C. 112, first paragraph, because the specification does not adequately disclose "means for switching" in amended Claim 12; (2) independent amended Claim 1 and Claim 2 dependent thereon are rejected on 35 U.S.C. 102 (e) as being anticipated by Truckai et al. (US 6813520); (3) independent amended Claim 1 and dependent Claims 2-10 and 17 are rejected under 35 U.S.C. 103(a) as unpatentable over Kasevich et al. (US 5057106) in view of Truckai et al., and (4) Claims 11-16 are rejected under 35 U.S.C. 103 (a) as unpatentable over Kasevich et al. in view of Truckai et al. and further in view of Sterzer et al. (US 5688050).

Dependent Claim 12 has been canceled and dependent Claim 13 has been amended to now depend from dependent Claim 11.

The rejections of independent amended Claim 1, both under 35 U.S.C. 102 (e) and under 35 U.S.C. 103(a), are traversed.

The structure defined in the preamble of amended independent Claim 1 (written in Jepson form) comprises an antenna. While the exterior surface of an inflated balloon presses the diseased tissue of a patient, the antenna transmits radiant energy to the diseased tissue, thereby to effect the heating of the diseased tissue (underlining added). The novelty clause of amended Claim 1 states that the antenna is longitudinally physically situated in cooperative relationship with the exterior surface of the balloon, thereby in use causing the inflated balloon pressing the diseased tissue to result in the antenna being in direct contact with irradiated tissue of the patient tissue (underlining added).

As known in the art, an "antenna" is a structure having a particular shape and particular size dimensions designed for radiating electromagnetic waves of a frequency within a particular frequency band in response to the antenna being energized by this frequency within this particular frequency band.

It is applicant's position that the cited Truckai et al. patent neither shows nor suggests any type of antenna structure and that elements 14 in Truckai et al. are stated by them to be "electrodes" and not an "antenna." In particular, Truckai et al. relates to an apparatus and method for ablating the

interior linings of body organs, such as the uterus and gallbladder (Col. 1, lines 16-18), which employ electrodes 14 shown in their Figs.2, 5A, 18, 19A, 19B and 19C, described in Col. 3, lines 39-46, Col. 6, line 13 to Col. 7, line 51 and Col. 10, line 48 to Col. 11. line 13.

Discussing Truckai et al. in more detail, the target tissue for ablation (e.g., prostate tissue set forth in Fig. 17, Col. 3. lines 36-37) undergoes bi-polar ablation (Col. 3, lines 38-41) in response to some or all of the + and - electrodes shown in any of Figs.2, 5A, 18, 19A, 19B and 19C situated in contact with the target tissue being energized with RF energy of about 500 kHZ and a constant power of approximately 30 W (Col. 10, lines 47-49). Thus, to the extent that the target tissue is considered to be a resistance, the current flowing between the + and - electrodes through the target tissue results in I^2R heating of the tissue (which is independent of frequency). To the extent that the target tissue is considered to be a lossy dielectric, the electric field between the + and - electrodes results in dielectric heating of the tissue (which is dependent on frequency). However, under no condition, will the interleaved + and - electrodes have the shape or dimension sizes that permit them to function as an antenna that radiates the 500 kHZ RF energy applied to these electrodes (underlining added). Therefore, Truckai et al. discloses no structure that possibly can be read on applicant's amended independent Claim 1.

Functionally, it is true that prostate disease can be treated both by applicant's electromagnetic-energy radiating antenna (applicant's Fig.6, described in specification Page 6, line 25 to Page 8, line 26) and Truckai et al.'s electric field between their non-radiating interleaved + and - electrodes (Truckai et al. Fig.17, described in their specification Col. 3, lines 36-37 and Col. 9, lines 35-36). However, of the two, only applicant's electromagnetic-energy radiating antenna is "suitable for use as an interstitial probe, for treating sub-coetaneous diseased tissue of a patient, such as (1) deep-seated tumors and (2) varicose veins." (applicant's specification Page 11, lines 21-24).

For all the foregoing reasons, it is submitted that the teaching of Truckai et al. neither structurally nor functionally anticipates amended independent Claim 1 and, therefore, the rejection thereof under 35 U.S.C. 102 (e) should be withdrawn.

It is applicant's position that the respective teachings of Kasevich et al. and Truckai et al. are at cross-purposes with one another and, therefore,

there is no basis for combining them to arrive at an anticipation of the invention defined in applicant's amended independent Claim 1.

More specifically, the underlined portions of the following 3 quotes from the Kasevich et al. specification make it clear that they want to avoid any ablation of tissue, in their to microwave balloon angioplasty, since they do not even want to heat wall tissue:

> (1) "The present invention relates in general to microwave balloon angioplasty, and pertains more particularly to a microwave or radiofrequency catheter system for the heating of plaque in arteries or blood vessel." (Col. 1, lines 14-17); (2) "to deliver microwave energy to a specific layer of plaque without heating wall tissue during pressure application by the balloon." (Col. 5, lines 15-17), and (3) "In accordance with the present invention, there are now described a number of techniques for providing control of the quantity of microwave energy that is coupled to coronary vessel plaque without heating vessel tissue." (Col. 5, lines 27-31).

Further, the underlined portions of the following 2 quotes from the Truckai et al. specification make it clear that their invention is directed solely to apparatus and method for causing ablation of tissue:

> (1) "The present invention relates generally to the field of apparatuses and methods for ablating or coagulating the interior surfaces of body organs. Specifically, it relates to an apparatus and method for ablating the interior linings of body organs such a the uterus and gallbladder." (Col. 1, lines 14-18), and (2) Ablation of the interior lining of a body organ is a procedure which involves heating the organ lining to temperatures which destroy the cells of the lining or coagulate tissue proteins for hemostasis." (Col. 1, lines 22-25).

It is plain that to apply the teaching of Truckai et al. to Kasevich et al. would involve heating the wall tissue of a coronary vessel to temperatures which destroy the cells thereof, which is antithetical to Kasevich et al.'s intent. Similarly, to apply the teaching of Kasevich et al. to Truckai et al. would involve not heating the lining tissue of the body organ which is to be ablated, which is antithetical to Truckai et al.'s intent.

Thus, Truckai et al. cannot possibly suggest combining their teaching with the teaching of Kasevich et al. to arrive at an anticipation of the invention defined in amended independent Claim 1. Similarly, Kasevich et al. cannot possibly suggest combining their teaching with the teaching of Truckai et al. to arrive at an anticipation of the invention defined in amended independent Claim 1. Therefore, the only suggestion for combining the respective teachings of Kasevich et al. and Truckai et al. to arrive at an alleged an anticipation of the invention defined in amended independent Claim 1 must have been made by the Examiner in the light of applicant's disclosure. This is improper.

For all the reasons set forth above, amended independent Claim 1 is submitted to be allowable.

Each of Claims 2-8, dependent on amended independent Claim 1, amended independent Claim 9 and Claims 9-11 and 13-17, dependent on amended independent Claim 9, is submitted to be allowable for at least the same reasons as amended independent Claim 1.

It is believed that this application is now in condition for allowance and such action is solicited.

Respectfully submitted,

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